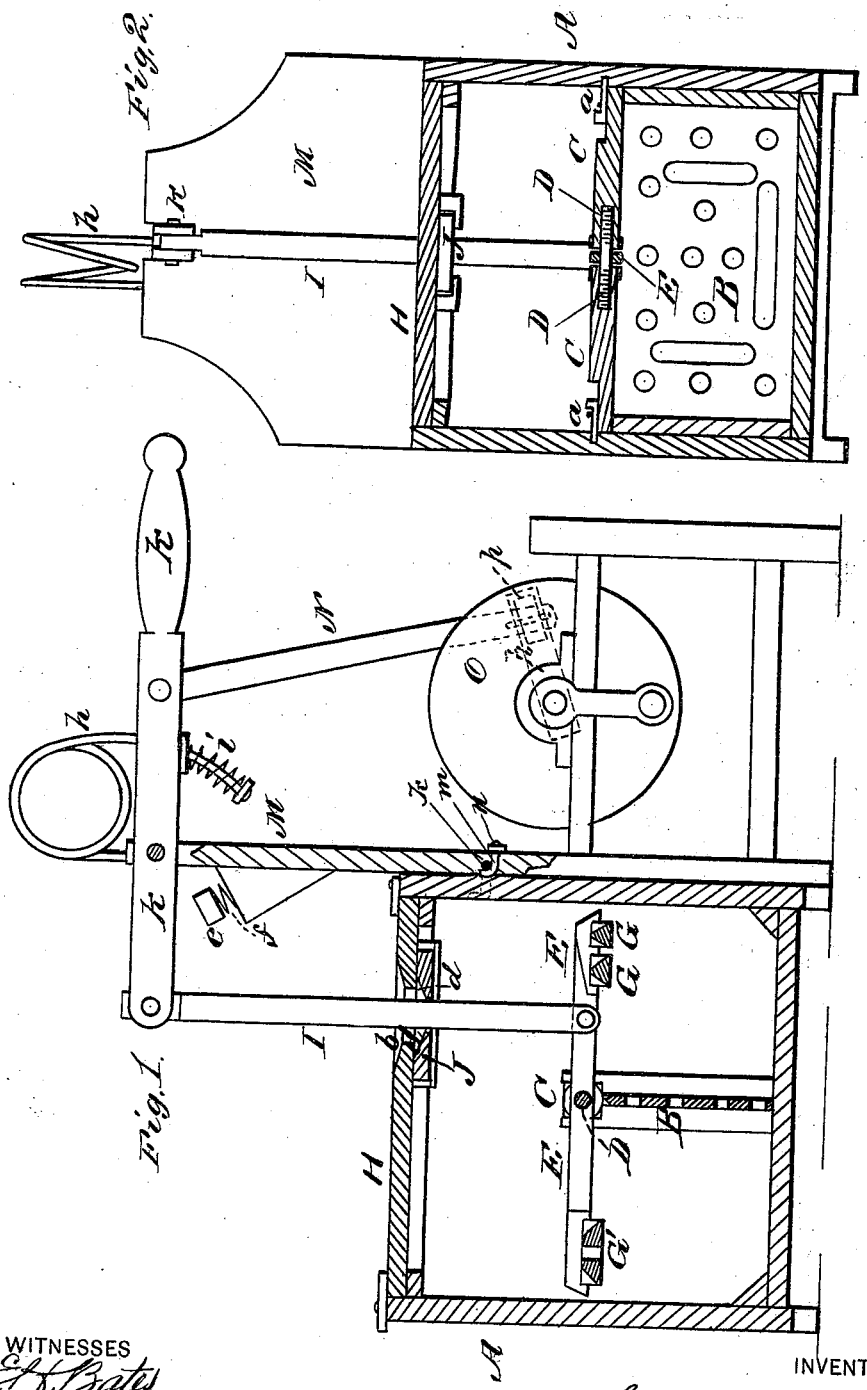
G. RIDLER.

CHURN.

No. 180,640. Patented Aug. 1, 1876.



WITNESSES

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GEORGE RIDLER, OF JEFFERSON TOWNSHIP, DUBUQUE COUNTY, IOWA.

IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. **180,640**, dated August 1, 1876; application filed March 4, 1876.

To all whom it may concern:

Be it known that I, GEORGE RIDLER, of Jefferson township, in the county of Dubuque and State of Iowa, have invented a new and valuable Improvement in Churning Apparatus; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal vertical section of my churn, and Fig. 2 is a transverse vertical sectional view of the same.

The nature of my invention consists in the construction and arrangement of a churn, as will be hereinafter more fully set forth.

In the annexed drawing, A represents the box, of any suitable dimensions, provided with a stationary center dash, B, placed transversely in the churn-box. This dash is perforated and slotted, as shown, and supports the cross-bar C, and the cream being thrown against said dash causes the globules to break. In the cross-bar C is inserted a double screw-axis, D, upon which the rocking dasher works. This dasher consists of a horizontal lever, E, pivoted on the axis D, and having at one end two parallel V-shaped cross-bars, G G, set at right angles to said lever, and at the other end a perforated and beveled dash, G′. The dasher thus constructed, by its rocking motion, causes a rebound action on or in the cream, making it dash from one side of the churn to the other, sending it through the slots and holes of the center dash B, and preventing the dashing of the cream up against the top of the churn. The center dash B and cross-bar C are held in place by two sliding bolts, *a a*. H is the lid of the churn, with aperture *b*, through which the rod I passes to connect the rocking dash with the lever K. On the under side of the lid is a sliding ventilator, J, through which said rod I also passes. This ventilator prevents the cream from coming to the top of the lid, and it has raised edges *d d*, so as to make a space under the lid, through which air from the exterior is admitted to the churn, its admission being facilitated by the vibrating motion given the slide J by the lever I. The lever K is pivoted in the top of a standard, M, and under its inner end is a spiral spring, *f*, with rubber cushion *e* acting as a push-spring. Under the outer end of the lever is a double-bow draw-spring, *h*, with a spiral push-spring, *i*. These springs help to work the lever and to regulate the stroke of the dash when churning with the lever K. The standard M is fastened to the end of the churn by means of a staple, *k*, a hook-bolt, *m*, and a nut, *n*, as shown.

For churning with a power attachment the outer end of the lever K is, by a pitman, N, connected with a wrist-pin, *p*, on the wheel O, the pitman-connection to said pin being adjustable, so as to move the pitman back and forth for regulating the stroke of the dash when churning.

The churn A may be surrounded by a chamber to contain hot or cold water for regulating the temperature of the cream.

What I claim as new, and desire to secure by Letters Patent, is—

1. The oscillating dasher, consisting of the lever E, V-shaped bars G G, and beveled and perforated bar G′, combined with and rocking upon the screw-axis D, located centrally over the stationary dasher B, as for the purpose set forth.

2. The combination of the stationary dash B, carrying the cross-bar C, with its screw D D and keys *a a*, and the rocking dasher E, carrying V-shaped bars G and beveled perforated dash G′, the whole being operated by the vertically-reciprocating rod I, substantially as described.

3. In combination with the vibrating rod I the correspondingly-vibrating ventilator J, having beveled edges *d* operating under the cover, and serving to prevent splashing and to secure ventilation, as set forth.

4. In combination with the lever K and its fulcrum M, the spiral spring *f*, with rubber cushion *e*, and the draw-spring *h*, passing through said lever K, and provided with push-spring *i*, the whole being mounted upon the said fulcrum M, as shown, for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

GEORGE RIDLER.

Witnesses:
J. B. HOWARD,
R. MCARTHUR.